**Code Breaking**

***LO:*** To use logic and frequency analysis to read and write in code.

***Overview:*** This project is a bit more teacher-led (via the PowerPoint). The idea is to look and practice codes. The whole class can work together to try frequency analysis.

***Suggested approach:*** Use the introduction PowerPoint to engage the students with the task. This project works well if students have mini-whiteboards and work along as prompted. The worksheets should be given out at the appropriate times. For the frequency analysis it worked well when different students in the class were given specific letters to count and then come together to collect results as a class. To decode the large piece of text most teachers got different students to concentrate on different lines and then read it as a whole class.

***Resources:***     [Introduction.ppt](http://www.functionalmathematics.co.uk/Projects/QCode%20Breaking.ppt)

[Morse Code (wav)](http://www.functionalmathematics.co.uk/Projects/morse_code.wav)

[Worksheet 1 (pdf)](http://www.functionalmathematics.co.uk/Projects/QWorksheet%201.pdf)

[Worksheet 2 (pdf)](http://www.functionalmathematics.co.uk/Projects/QWorksheet%202.pdf)

[Worksheet 3 (pdf)](http://www.functionalmathematics.co.uk/Projects/QWorksheet%203.pdf)

[Solutions (pdf)](http://www.functionalmathematics.co.uk/Projects/QSolutions.pdf)

***Notes:*** For the link to work with the *morse code sound file* within the PowerPoint, the *wav* file needs to be saved in the same folder as the *ppt* file.